

	L #	Hits	Search Text	DBs	Time Stamp
1	L1	149121	(intermit\$5 pulse pulsed pulsing) near3 (plasma voltage current)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:07
2	L2	4285	(427/569-579,562-564,530).C CLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:03
3	L3	1346	(118/723E-723IR).CCLS.	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:04
4	L4	275	1 and (2 or 3)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:04
5	L5	184222	boron boride "Bcl.sub.3" "BF.sub.3" "BX.sub.3"	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:06

SN09/594,905

2

	L #	Hits	Search Text	DBs	Time Stamp
6	L6	65	4 and 5	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:06
7	L7	157409 8	pulse near 3 (duration period pause)	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:08
8	L8	54	6 and 7	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:08
9	L9	11	6 not 8	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM_TD B	2002/03/17 16:08

corrector

L 10 110361 near 3
 L 11 ~~6 not 11~~
 L 12 6 and 10 28

3

	Document ID	Issue Date	Title	Current OR	Inventor
1	US 200100412 30 A1 [0019] Bonding... 1-10 mbar plasma may be pulsed or un-pulsed	20011115 371 → 1/23/97	Process for producing wear-resistant boride layers on metallic material surfaces	427/569	<i>related to patent</i> Hunger, Hans-Jorg et al.
2	US 6342277 B1	20020129	Sequential chemical vapor deposition	427/562	Sherman, Arthur
#1 3	US 6335536 B1	20020101 10/99	Method and apparatus for low voltage plasma doping using dual pulses	250/492.3	Goeckner, Matthew J. et al.
4	US 6306225 B1	20011023	Process for producing wear-resistant boride layers on metallic material surfaces	148/241	Hunger, Hans-Jorg et al.
5	US 6281147 B1	20010828	Plasma CVD method	438/788	Yamazaki, Shunpei et al.

4

	Document ID	Issue Date	Title	Current OR	Inventor
6	US 6200651 B1	20010313	Method of chemical vapor deposition in a vacuum plasma processor responsive to a pulsed microwave source	427/571	Roche, Gregory A. et al.
#2 7	US 6182604 B1	20010206 10/99	Hollow cathode for plasma doping system	118/723E	Goeckner, Matthew J. et al.
8	US 6162709 A	20001219	Use of an asymmetric waveform to control ion bombardment during substrate processing	438/513	Raoux, Sebastien et al.
9	US 6139921 A	20001031 11/23/98	Method for depositing fine-grained alumina coatings on cutting tools	427/576	Taschner, Christine et al.
10	US 6136388 A	20001024	Substrate processing chamber with tunable impedance	427/569	Raoux, Sebastien et al.

Abs-
 bipolar pulse DC voltage
 H_2O_3 counter turbo
 proof date
 ruled app-ong
 #3

	Document ID	Issue Date	Title	Current OR	Inventor
11	(AB) powder coat pulsed plasma US 6124564 A prior date	20000926 1/23/98	Hardfacing compositions and hardfacing coatings formed by pulsed plasma-transferred arc	219/121.47	Sue, J. Albert et al.
12	(AB) plasma CVD pulsed waveform - capla 2 step microwave US 6110542 A the power is supplied in pulses... pulse 1-30ms	20000829 Apr 5, 1998	Method for forming a film	427/577	Miyanaga, Akiharu et al.
Processes which utilize the capla process... Ex. 3(B)(C)... dep BP BN from de					
13	US 6101971 A	20000815	Ion implantation control using charge collection, optical emission spectroscopy and mass analysis	118/723E	Denholm, A. Stuart et al.
14	US 6098568 A	20000808	Mixed frequency CVD apparatus	118/723E	Raoux, Sebastien et al.
15	US 6096160 A	20000801 eff. fd. 2/5/98 good	Helicon wave plasma processing apparatus	156/345	Kadomura, Shingo

(D) The most sig. feature... pulse signal of all six I found
 * (P) This was the ~~most~~ set... pulse period = 60 μsec & pulse width = 80 μsec
 (D) " " " " BC13 flow rate = 20 sccm, Cl₂ = 40 ; H₂ = 10

6

	Document ID	Issue Date	Title	Current OR	Inventor
16	US 6055928 A	20000502	Plasma immersion ion processor for fabricating semiconductor integrated circuits	118/723E	Murzin, Ivan Herman et al.
17	US 6041734 A	20000328	Use of an asymmetric waveform to control ion bombardment during substrate processing	118/723E	Raoux, Sebastien et al.
18	US 6015762 A	20000118	Plasma CVD method	438/788	Yamazaki, Shunpei et al.
19	US 5988103 A	19991123	Apparatus for plasma source ion implantation and deposition for cylindrical surfaces	118/723E	Fetherston, Robert P. et al.

	Document ID	Issue Date	Title	Current OR	Inventor
(D) Figs. 4 shows... duration of pulses typically 50-500 μ sec duty cycle	US 5983828 A	19991116 eff. date 1/28/00 good	Apparatus and method for pulsed plasma processing of a semiconductor substrate	118/723I	Savas, Stephen E.
X Boron neutron in backscattering list good	US 5981078 A	19991109 not pub'd: 2/27/02	Composite body and process for its production	428/457	Tabersky, Ralf et al.
(D) Adhesion of PECVD in DE... 200-900V, pulse duration 20 μ sec - 20 msec					
	US 5935461 A	19990810	Pulsed high energy synthesis of fine metal powders	219/121.59	Witherspoon, F. Douglas et al.
(AB) pulsed laser assisted RF pulsed synchronized	US 5928528 A	19990727 9/24/97	Plasma treatment method and plasma treatment system	216/67	Kubota, Masafumi et al.
(D) the specimen A... BSC (boron...)	US 5900289 A	19990504	Method of producing a colorating coating	427/577	Hartmann, Rolf et al.
	US 5897713 A	19990427	Plasma generating apparatus	118/723I	Tomioka, Kazuhiro et al.

8

	Document ID	Issue Date	Title	Current OR	Inventor
<p><i>(Ab)</i></p> <p><i>app only #10</i></p> <p>26</p>	<p><i>pulsed plasma w/ predetand app., fig. 1 pulsed plasma</i></p> <p>US 5883016 A</p>	<p>19990316</p> <p><i>4/96 → CIP</i></p> <p><i>on 5/508, 27</i></p>	<p>Apparatus and method for hydrogenating polysilic on thin film transistors by plasma immersion implantation</p>	438/798	Chan, Chung et al.
<p><i>11 #</i></p> <p>27</p>	<p><i>Fig. 6 - good - DC. but physical vaps. dep. app.</i></p> <p>US 5837331 A</p> <p><i>(D) Refer to fig. 1. end BN</i></p>	<p>19981117</p> <p><i>3/96</i></p>	<p>Amorphous multi-layered structure and method of making the same</p>	427/569	Menu, Eric P. et al.
28	US 5693376 A	19971202	Method for plasma source ion implantation and deposition for cylindrical surfaces	427/523	Fetherston, Robert P. et al.

	Document ID	Issue Date	Title	Current OR	Inventor
#12 29	US 5654043 A	19970805	Pulsed plate plasma implantat ion system and method	427/527	Shao, Jiqun et al.
<i>Fig. 5 ... B shows for BE3</i> (D) A pulsed modulator circuit for ... pulsed discharge chosen to give development of glow dis.					
30	US 5630880 A	19970520	Method and apparatus for a large volume plasma processor that can utilize any feedstock material	118/723MP	Eastlund, Bernard J.
#12 III 31 #5 = #13	US 5626922 A	19970506	Plasma processin g method	427/535	Miyanaga, Akiharu et al.

	Document ID	Issue Date	Title	Current OR	Inventor
#14	US 5607264 A	19970304	Tool with diamond cutting edge having vapor deposited metal oxide layer and a method of making and using such tool	407/118	Konig, Udo et al.
#15	US 5587233 A	19961224	Composite body and its use	428/325	Konig, Udo et al.
#16	US 5587207 A	19961224	Arc assisted CVD coating and sintering method	427/571	Gorokhovs ky, Vladimir I.
	US 5558718 A	19960924	Pulsed source ion implantation apparatus and method	118/723E	Leung, Ka-Ngo

mainly apparatus.

No Pulsed plasma CVD

(AD) Plasma active pulsed w/pulsed Direct voltage
Borides in Boride growth tests

(Blue sensor device 20µs-20ms)

BN

	Document ID	Issue Date	Title	Current OR	Inventor
#17 36	US 5547716 A	19960820	Laser absorptio n wave depositio n process and apparatus	427/577	Thaler, Stephen L.
#18 37	(AB) plasma activated US 5516588 A	19960514	Composite body, its use and a process for its productio n but see claim	428/469	van den Berg, Hendrikus et al.
#19 38	(AB) cBN US 5503913 A	19960402	Tool with wear-resi stant cutting edge made of cubic boron nitride or polycryst alline cubic boron nitride, a method of manufactu ring the tool and its use	428/216	Konig, Udo et al.
39	US 5397428 A	19950314	Nucleatio n enhanceme nt for chemical vapor depositio n of diamond	117/86	Stoner, Brian R. et al.

#20

STP
(B) On Time ... BF₃ plasma
(D) The pure and PI₃ ... pulse-...
BF₂...

	Document ID	Issue Date	Title	Current OR	Inventor
40	US 5354381 A	19941011	Plasma immersion ion implantation (PI.sup.3) apparatus	118/723E	Sheng, Terry T.

#21

pulse HF

41	US 5304407 A	19940419	Method for depositing a film	427/569	Hayashi, Shigenori et al.
----	--------------	----------	------------------------------	---------	---------------------------

#22

BF₃

42	US 5289010 A	19940222	Ion purification for plasma implantation	250/492.21	Shohet, Juda L.
----	--------------	----------	--	------------	-----------------

#23

1000r

43	US 5192578 A	19930309	Method of producing coating using negative DC pulses with specified duty factor	427/576	Ramm, Jurgen et al.
----	--------------	----------	---	---------	---------------------

#24

44	US 5173328 A	19921222	Plasma CVD process for coating a basic metallic body with a non-conductive coating material	427/576	Reiter, Norbert et al.
----	--------------	----------	---	---------	------------------------

Whe Kong
cha

13

	Document ID	Issue Date	Title	Current OR	Inventor
45	US 5130170 A	19920714	Microwave PCVD method for continuously forming a large area functional deposited film using a curved moving substrate web with microwave energy with a directivity in one direction perpendicular to the direction of microwave propagation	427/575	Kanai, Masahiro et al.
#25 46	US 5098483 A	19920324	Methods of treating spherical surfaces	423/497	Little, Roger G. et al.
poor #26 47	US 5078848 A	19920107	Procedure and apparatus for the coating of materials by means of a pulsating plasma beam	204/192.38	Anttila, Asko et al.

(D) Instead of vacuum ...
kms Rx → BN

	Document ID	Issue Date	Title	Current OR	Inventor
48	US 4937205 A	19900626	Plasma doping process and apparatus therefor	438/513	Nakayama, Ichiro et al.
49	US 4937094 A	19900626	Method of creating a high flux of activated species for reaction with a remotely located substrate	427/574	Doehler, Joachim et al.
50	US 4883686 A	19891128	Method for the high rate plasma deposition of high quality material	427/562	Doehler, Joachim et al.
#29 51	US 4764394 A	19880816	Method and apparatus for plasma source ion implantation	427/525	Conrad, John R.
52	US 4762756 A	19880809	Thermochemical surface treatments of materials in a reactive gas plasma	428/698	Bergmann, Erich et al.

15

1/28

	Document ID	Issue Date	Title	Current OR	Inventor
53	US 4645895 A	19870224	Method and apparatus for surface-treating workpieces	219/76.13	Boxman, Raymond L. et al.
54	US 4568563 A	19860204	Optical fibre manufacture	427/538	Jackson, Thomas M. et al.